



The Commonwealth of Massachusetts
Executive Office for Administration and Finance
Information Technology Division

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REVISED: 1/12/04

To: ITD Chargeback Customers

From: Louis Angeloni, Chief Financial Officer
Information Technology Division

Subject: FY 2004 Chargeback Policy, Changes, Rates and Services

Date: April 29, 2003

Enclosed is the FY2004 Chargeback Policy Update, Changes & Additions to Services, Rate Schedule and Description of Services. The policy update identifies key chargeback policies tied to other policies on the ITD website. Principle changes and additions to services from FY2003 are noted. This version links automatically to related policies on the ITD website. These links may not work if your office doesn't have a MAGNet connection. However, this document will be posted and maintained on ITD's website to which you should have access via MAGNet or the Internet.

Note: Changes to Agency Chargeback Coordinators should be sent to Ray Jones, 617-626-4433 or raymond.jones@MassMail.State.MA.US with the correct information.

Ownership

All hardware and software (operating systems, database, monitors, etc.) assets acquired by ITD on behalf of its clients and installed in either central or remote ITD facilities becomes the property of ITD to maintain, operate and upgrade as required whether the client acquires such asset(s) directly or ITD purchases them and charges the acquisition costs back to the client. For example, clients requesting network connections must purchase the routers and DSUs specified and installed by ITD at client sites. Similarly for remote firewalls (a.k.a. extended DMZs) installed at client sites.

Dedicated vs. Shared Services

Equipment, software or services procured, licensed or contracted by ITD dedicated to a single client application will be charged solely to that client. If such equipment, software or service is shared between two or more clients, it will be charged back based on usage or apportionment depending on which is applicable. If usage cannot be measured or is impractical, chargebacks will be pro-rated based on cost. For example, the mid-range servers and websites dedicated to client XYZ's application(s) are charged to that client whereas the network connecting XYZ's application(s) to the WAN and/or Internet is a pro-rated shared service charged by bandwidth and storage of XYZ's application(s) in the Storage Area Network (SAN), if applicable, charged based on the space allocated (usage).

Authorization for Services

ITD provides additional or new services *only* if the request is signed by the customer representative authorized to incur charges. Major service additions or expansion which significantly increase chargebacks must be pre-approved jointly by the customer and ITD through a [Business Application Request](#) (BAR). These are explained and completed with the assistance of the client's ITD contact, normally the [Business Relationship Manager](#) (BRM) for your [Agency](#). Other additions or changes must be similarly pre-approved through established procedures, e.g., the [Customer Service Request Form](#) (CSRF).

Frame Relay Services (FRS)

Effective FY2003, ITD no longer installs *new* 56KB FRS. ITD recommends 384KB or T1 service for wider bandwidth and better response times at a comparable cost. Clients requesting this service must provide compelling justification for installing this service.

Encumbrances and Monthly Billing

Monthly billing (IVs) cannot commence until the client encumbers funds and approves the Inter-agency Encumbrance (IE) issued by ITD. Comptroller policy allows clients 30 days to approve IEs or to negotiate an adjustment with ITD as necessary. The monthly statement will reflect the FY total due until the IE is approved and an Inter-agency Voucher (IV) is issued.

Beginning Balance

State policy doesn't permit carrying a debit or credit balance to the next fiscal year. June charges and any unpaid amounts should be paid or settled during the Accounts Payable period. The subsequent FY beginning balance is set to zero. Address any issue with this policy to the CFO at ITD.

FY2004 Chargeback Policy Update

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HR/CMS Services

As in FY2003, HR/CMS is a chargeback to all departments on the HR/CMS payroll. The rate for this [Financial / Payroll Service](#) is based on the cost to issue each payroll check. In FY2003, there was a separate charge for PMIS / PCRS charge as an average headcount per month. These costs are combined with HR/CMS and should end by FY2005. Note that the combined HR/CMS - PMIS / PCRS FY2003 charge was **\$2.76** / check ($\$2.45 + (\$0.68 \times 12/26)$) vs. \$2.692 in FY2004.

Warehouse Services

As of FY2004, the Information Warehouse (IWH) cost is distributed between the MMARS transaction charge and the HR/CMS payroll charge. FY2003 legislative action terminated separated funding of the IWH requiring ITD to either separately charge for this service as it did in FY1997/1998 or distribute it over these two services which it directly supports. ITD opted for the latter.

MassMail

State-wide implementation of the MassMail E-mail commenced in FY2002. The policy for when mailbox charges commence and terminate have been subsequently clarified. Refer to [MassMail Policies and Procedures](#) for policy guidelines and [Charge Back Procedures](#) re charges for deleted mailboxes. In FY2003, the first fraction of a month (the migrating period) was not charged to the migrating agency. In FY2004, **individuals** will not be charged the first fraction of a month. This change reflects the reality that some migrations have taken longer than a month.

Mid-Range Services.

The services offered in FY2004 are basically the same as last year except that the rates have been somewhat redefined. The rates were confusing to both the customers and the BRMs who had to explain these rates/services. We have eliminated many of the tiers.

Remote Firewall Service (FWS)

As of FY2003, [Remote Firewall Service \(FWS\)](#) rates have been integrated with the corresponding [Mid-Range Service](#) rates:

- The Setup for a remote FWS is charged the same as Loading a Client Application - **\$489.00**.
- The monthly support rate is the same as Standard Server Operational Support - **\$548.00**.

Thus, provisioning and support for FWS, whether at MITC, McCormack or a remote site is charged the same as setup and support for other servers.

VPN Service

Virtual Private Network (VPN) service. This service by Verizon is billed directly to the client. Clients have access to ITD's network or other state services by dial-up, DSL or cable modem via a secure "tunnel" through the Internet. See [ITD - Virtual Private Networking \(VPN\)](#) for information and how to arrange for this service.

Local Area Network (LAN)

LAN support will be charged back to selected clients (principally clients previously supported by the former Central Business Office (CBO)). The rate for these services is **\$59.00** per seat per month. The charge per agency each month is based on the number of mailboxes in MassMail during that month.

Other Policies

Usage based credits, adjustment policy, chargeback rate methodology and other chargeback policy issues are addressed in question and answer form at [Frequently Asked Chargeback Questions](#).

FY2004 Rate Schedule Effective July 1, 2003

REVISED 1/12/04

SUMMARY: ITD DATA CENTER, NETWORK AND MAIL ROOM SERVICES

The FY2004ITD rate for each billable Data Center, Network and Mail Room Service is listed below by Resource Type. Access the [Description](#) of the Resource Charge by clicking on its link.

Resource	Billable Unit	FY2004 Rate	FY2003 Rate	Difference	% Change
<u>MAINFRAME SERVICES:</u>					
<u>Central Computer Services:</u>					
Prime CPU Time	CPU Hour	\$99.81	\$100.30	(\$0.49)	-0.49%
Non-prime CPU Time	CPU Hour	\$40.87	\$42.53	(\$1.66)	-3.91%
Prime I/O Operations	1000 I/Os	\$0.0390	\$0.0367	\$0.0023	6.19%
Non-prime I/O Operations	1000 I/Os	\$0.0158	\$0.0144	\$0.0014	9.43%
<u>Printed Pages:</u>					
Type I - Standard	1000 Pages	\$28.85	\$26.36	\$2.49	9.46%
Type II – Special	1000 Pages	\$19.23	\$17.66	\$1.57	8.92%
<u>Tape Mounts</u>					
	Mount	\$0.753	\$0.796	(\$0.043)	-5.46%
<u>On-line Data Storage (DASD):</u>					
	1000 Track-Day	\$0.156	\$0.185	(\$0.029)	-15.69%
<u>Off-line Storage:</u>					
Tape	Giga Byte-Day	\$0.044	\$0.046	(\$0.002)	-3.50%
Archive	Giga Byte-Day	\$0.395	\$0.429	(\$0.034)	-8.01%
Report Storage	1000 Page-Day	\$0.0196	\$0.0200	(\$0.0004)	-2.13%
<u>NETWORK SERVICES:</u>					
<u>SNA Connect Time</u>					
	Minute	\$0.0078	\$0.008	(\$0.0003)	-4.09%
<u>MAGNet Port Connections:</u>					
10 Mbs Campus Routed/ Switched	Port - Month	\$415.00	\$398.00	\$17.00	4.27%
100 Mbs Switched	Port - Month	\$1,079.00	\$1,034.00	\$45.00	4.35%
100 Mbs Switched – Shared	Port - Month	\$539.00	\$517.00	\$22.00	4.26%
100 Mbs Switched – Shared App.	Port - Month	\$456.00	\$437.00	\$19.00	4.35%
155 Mbs ATM	Port - Month	\$1,245.00	\$1,193.00	\$52.00	4.36%
56 Kbs Frame Relay	Port - Month	\$415.00	\$398.00	\$17.00	4.27%
56 Kbs Frame Relay-Shared	Port - Month	\$311.00	\$299.00	\$12.00	4.01%
384 Kbs Frame Relay	Port - Month	\$518.00	\$497.00	\$21.00	4.23%
384 Kbs Frame Relay – Shared	Port - Month	\$347.00	\$333.00	\$14.00	4.20%
1.544 Mbs (T1) Frame Relay	Port - Month	\$1,037.00	\$994.00	\$43.00	4.33%
1.544 Mbs (T1) F/R–Shared	Port - Month	\$695.00	\$666.00	\$29.00	4.35%
45 Mbs (T3) Point-to-Point	Port - Month	\$9,131.00	\$8,746.00	\$385.00	4.40%
<u>Transparent LAN Service (TLS)</u>					
10 Mb TLS	Port - Month	\$2,301.00			New Service
100 Mb TLS	Port - Month	\$6,137.00			New Service
100 Mb TLS (Shared)	Port - Month	\$2,301.00			New Service
Install / Move / Upgrade Circuit	Each Install / Chng	\$228.00	\$219.00	\$9.00	4.11%
<u>DDSII Services (N-S Only):</u>					
19.2KBs Line	Line Drop / Month	\$278.87	\$237.25	\$41.62	17.54%
Mileage	Mile / Month	\$2.79	\$2.37	\$0.42	17.67%

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LAN Support	Mailbox / Month	\$59.00	N/A	N/A	New Service
State House PBX Maintenance	Port - Month	\$3.73	\$3.11	\$0.62	19.98%
Resource	Billable Unit	FY2004 Rate	FY2003 Rate	Difference	% Change
FINANCIAL/PAYROLL SRVCS:					
MMARS Processed Transactions	Transaction	\$0.085	\$0.079	\$0.006	7.13%
PMIS / PCRS Ave P/R Head Count	Each Check		\$0.314	Merged with HR/CMS	
HR/CMS P/R Checks Issued	Each Check	\$2.69	\$2.45	(\$0.07)	-2.91%
MASSMAIL SERVICES:					
Mail Boxes under 50MB (Class A)	Ea Mail Box / Mo.	\$8.85	\$9.50	(\$0.65)	-6.87%
Mail Boxes under 100MB (Class B)	Ea Mail Box / Mo.	\$13.21	\$14.25	(\$1.04)	-7.28%
Mail Boxes under 150MB (Class C)	Ea Mail Box / Mo.	\$17.69	\$19.00	(\$1.31)	-6.87%
MID-RANGE SERVICES:					
Installation and Setup:					
ITD Install IBM / HP Unix Sys	Each Server	\$3,355.00	\$3,465.00	(\$110.00)	-3.17%
Windows 2000 Systems	Each Server	\$914.00	\$945.00	(\$31.00)	-3.28%
Load Client App / Rem. FWS	Each Server	\$489.00	\$504.00	(\$15.00)	-2.98%
Harden Server	Each Server	\$1,334.00	\$1,386.00	(\$52.00)	-3.75%
Install Database (Optional)	Each Server	\$306.00	\$315.00	(\$9.00)	-2.86%
Server Hardware Support:					
Tier 1 Occupancy Only	Server / Month	\$49.00	\$51.00	(\$2.00)	-3.92%
Tier 2-1 Occ.+ Maint / Rem. FWS	Server / Month		\$154.00	Merged w/ Wintel	Server & Support
Tier 2-1 Occ.+ Maint (AIX)	Server / Month		\$878.00	Merged w/ AIX/HP	Server & Support
Tier 2-3 H-P UNIX Server	Server / Month	\$4,812.00	\$4,944.00	(\$132.00)	-2.67%
Server Software Support:					
Standard Server Support	Server / Month		\$315.00	Merged w/ Wintel	Server & Support
Non-Standard Server Support	Server / Month		\$378.00	Merged w/ AIX/HP	Server & Support
Server Operation Support:					
Win NT 4.X	Server / Month		\$28.00	Merged w/ Wintel	Server & Support
Windows 2000 Server S/W	Server / Month		\$83.00	Merged w/ Wintel	Server & Support
Wintel Server & Support:	(Inc. Remote FWS)				
Low vs. FY03	Server / Month	\$548.00	\$552.00	(\$4.00)	-0.72%
High vs. FY03	Server / Month	\$548.00	\$665.00	(\$117.00)	-17.59%
IBM AIX Server and Support:					
Low vs. FY03	Server / Month	\$1,398.00	\$1,380.00	\$18.00	1.33%
High vs. FY03	Server / Month	\$1,398.00	\$2,167.00	(\$769.00)	-35.47%
Oracle IAS Server & Support:	CPU Unit / Month	\$363.00	\$375.00	(\$12.00)	-3.20%
Database Software Support:					
SQL Server 7.0	CPU Unit / Month		\$60.00	Merged w/ Std / Enterprise Edition	
SQL Standard Edition	CPU Unit / Month		\$180.00	Merged w/ Std / Enterprise Edition	
SQL Std / Enterprise Edition:					
Low vs. FY03	CPU Unit / Month	\$439.00	\$180.00	\$259.00	143.89%
High vs. FY03	CPU Unit / Month	\$439.00	\$455.00	(\$16.00)	-3.52%
Oracle 8i / 9i Enterprise	CPU Unit / Month	\$726.00	\$750.00	(\$24.00)	-3.20%
Open Systems Storage					
	1000 Track-Days	\$0.022	\$0.023	(\$0.001)	-2.74%
	Giga Byte-Day	\$0.471	\$0.49	(\$0.02)	-3.45%

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Resource	Billable Unit	FY2004 Rate	FY2003 Rate	Difference	% Change
<u>OTHER SOFTWARE SUPPORT:</u>					
IMS/ESA (Mainframe)	Charge / Month	\$12,573.00	\$12,573.00	\$0.00	0.00%
ORACLE 8I Enterprise (M/F)	Concurrent User/Mo	\$24.32	\$24.32	\$0.00	0.00%
<u>DIRECT LABOR SUPPORT:</u>					
Consultant	Hour	Contract Rate	Contract Rate	N/A	N/A
Mid-Range Systems / Database	Hour	\$63.00	\$63.00	\$0.00	0.00%
Mid-Range Operations	Hour	\$45.00	\$45.00	\$0.00	0.00%
Systems / Network Engineering	Hour	\$49.00	\$49.00	\$0.00	0.00%
Operations / Forms Design	Hour	\$36.00	\$36.00	\$0.00	0.00%
<u>MAIL ROOM SERVICES:</u>					
Manual Document Insertion	Document	\$0.256	\$0.256	\$0.00	0.00%
DIMS Insertion (automated)	Document	\$0.035	\$0.035	\$0.00	0.00%
Metered Mailing (CMF)	Postage	Meter + 16.8%	Meter+17.5%	(0.7%)	(4.17%)
Report Bin(CMF)	Bin Size (Level 1)	\$22.00		New Service	New Service
Inter-Office Mail Bin(CMF)	Bin Size (Level 1)	\$6.00		New Service	New Service
Daily Incoming Mail Bin(CMF)	Bin Size (Level 1)	\$92.00		New Service	New Service
Inter-Office Pickup or Deliery(CMF)	Per Month	\$44.00		New Service	New Service
State House Courier(CMF)	Per Month	\$190.00		New Service	New Service
Downtown Courier(CMF)	Per Month	\$351.00		New Service	New Service
<u>SPECIAL SERVICES:</u>					
<u>Dedicated MITC Services:</u>					
Office Space	Sq. Ft / Month	\$2.00	\$2.00	\$0.00	0.00%
Telephone Services	Telco Charges	Varies	Varies	N/A	N/A
<u>One-Time Charges:</u>					
Equipment	Purchase Cost + 8%	Varies	Varies	N/A	N/A
Software Licenses	Purchase Cost + 8%	Varies	Varies	N/A	N/A
<u>MINIMUM CHARGE</u>					
	Month	\$20.00	\$20.00	\$0.00	0.00%

MAINFRAME SERVICES

Central Computer Services: CPU Time and Input / Output Ops (I/Os)

Batch jobs and On-line transaction charges are based on the number of CPU Hours and I/Os used. The CPU hourly rate is **\$99.81** - Prime Time and **\$40.87** - Non-prime. The rate for I/Os is **3.9 cents** and **1.58 cents** per thousand for prime and non-prime times, respectively.

CPU Units. A CPU Unit is computed as follows:

CPU Unit	=	CPU Hour * F_P * F_A
CPU Hour	=	The Central Processor Unit Hours used by the program
F_P	=	A Performance Factor that normalizes CPU time of different processors to a standard CPU hour. Work processed by different CPUs should be charged for the same usage. See Note 1 for the Performance Factors assigned to the computers installed at the MITC Data Center.
F_A	=	An Adjustment Factor is applied for CPU usage for resources shared by like type applications (Batch, TSO, CICS, etc.). See Note 2 for sample Adjustment Factor formulae.

I/O Units. An I/O (Input / Output) is the transfer of a data block to or from tape, disk, terminal, printer, etc. A block consists of one or more records up to 32,768 bytes. I/O volume equals the number of data blocks transferred. Number of blocks times average block size equals the total data transferred. I/O Units are I/Os divided by 1000 (standard) times an adjustment factor similar to that for CPU hours.

Prime / Non-Prime. Prime time begins at **8:00 AM** and ends at **5:00 PM**. Monday through Friday, except state holidays. All other time intervals are at non-prime rates. An on-line session or batch job that commences in prime time is charged at the prime time rate regardless of the termination time. Similarly, a job or transaction that commences in non-prime time is charged at the non-prime rate.

Example. A prime time job requires 0.3 CPU minutes and 20,000 I/Os on the IBM 9672 (F_P = 7.4340). If the CPU and I/O adjustment factors are 1.12 and 1.05, respectively, the job cost is as follows:

CPU Hour	*	F_P	*	F_A	*	Rate Per CPU Unit	=	CPU Cost
0.3 / 60		7.4340		1.12		\$99.81	=	\$4.16
I/O	/	F_S	*	F_A	*	Rate Per I/O Unit	=	I/O Cost
20,000		1000		1.05		\$0.039	=	\$0.82
Total for Job							=	\$4.98

Printed Pages

Printed Pages consists of Standard (Type I) and Special (Type II). Special Pages are pre-printed forms or documents compressed from one to two or four images per page. The rate for Type II printing is **\$19.23** per thousand pages. All other printing is Standard (Type I) at **\$28.85** per thousand pages. Two-sided compressed output is charged by the *physical* page, not by the *page image*. A 2-sided report averages \$9.62 / thousand pages and a compressed 4 images / page report \$4.81 / thousand pages. Page counts are subject to the adjustments explained in [Note 3](#).

Tape Mounts

Users requiring magnetic tape input or output are charged **\$0.753** for each physical tape reel or cartridge mounted regardless of time period or computer system.

On-line Data Storage (OS/390 DASD)

For each data set maintained on-line, the charge is the number of tracks *allocated* times the number of days *on-line* during the monthly billing period. IBM 3390 class device allocations are converted to IBM 3380 equivalent tracks, the standard for billing. The base rate is **\$3.16** per gigabyte (GB) or 1000 megabytes of storage per day. This base rate is **\$0.156** per thousand track-days for IBM 3380 DASD (47,476 bytes / track)* or **\$0.186** / 1000 track-days for IBM 3390 DASD (56,664 bytes / track).

Off-line Data Storage

Tape. Users who write files *directly* to magnetic tape for on-site or vault storage are charged **\$0.044** per gigabyte (1,000 megabytes) per day of storage or fraction thereof. Files less than 200 megabytes will be charged for the full 200 megabytes unless the user stacks multiple data sets on the same volume. Thus, the minimum charge per month is **\$0.27** (0.2 GB x 30 x 0.046) for single volume data sets regardless of file size. Stacked data sets are charged based on the actual file size at the per diem rate.

Archive. On-line files are archived by the system when not in use but automatically restored on-line upon request. While archived, files are charged **\$0.395** per gigabyte per day or fraction thereof. Note that it's more economical for on-line files under 20 megabytes to be archived than written directly to tape by the user.

Report Storage. The Data Center employs ViewDirect for direct viewing and archival of reports to reduce printed report costs. Frequently referenced reports and those archived for various periods may be retrieved, viewed and printed (totally or partially) by the user. The rate is **1.96 cents** per thousand pages for each day in archival (off-line) storage. Reports stored on-line are charged at the track-day rate, the same as for all DASD files. The duration of *on-line* vs. *off-line* storage is controlled by the user. ViewDirect report storage is compressed so these costs are less than other on-line and off-line storage charges. At current rates, reports kept in ViewDirect cost less than printing if they are retained for less than 32 months. On-line viewing also incurs a CICS transaction charge. Reports printed via DocDirect (local) do not incur print charges.

Comparison of On-line and Off-line Services in Gigabytes:

FY2004 Cost per Gigabyte Day

DASD	\$3.16
Archive	\$0.395
Tape	\$0.044

NETWORK SERVICES (Wide Area Network)

The Wide Area Network (WAN) known as MAGNet (Massachusetts Access to Government Network) provides broad-band communication services across the state interconnecting state and local government operations for agency E-mail, client/server applications, Information Warehouse access, HR/CMS, imaging, Internet services, file transfers plus other network and mainframe applications.

SNA Connect Time

Mainframe SNA services are charged by user connect time. Users are charged **0.78 cents** per minute for SNA session time. Connect time is the duration of an on-line session (TSO, CICS, COM-LETE or IMS) from logon to termination. A session terminates when the user logs off or is idle over 15 minutes. Connect time is measured and reported by the user's mainframe UAID (Universal Access ID).

MAGNet Connections

Connections to the MAGNet Wide Area Network are by Frame Relay Service (FRS) leased from telcos (Verizon, etc.) or directly to the fiber "backbone" that links the central state office building complex in

* One gigabyte equals 21,063 IBM 3380 tracks ($10^9 \div 47,476$). Thus, $\$3.16 \div 21,063$ is $\$0.00015$ / track / day or $\$0.156$ per 1000 track-days.

Description of FY2004 Services

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Boston and at MITC in Chelsea. Users are charged a monthly rate for each routed or switched port connection. The cost to service and support a connection depends on bandwidth, type, features and other factors. Monthly rates include Internet access and support services such as the global address directory, firewall security and anti-virus protection. Users sharing port connections pay lower rates.

Internet services continue to expand significantly. Unlike FY2003, these rates could not be reduced. Charges for both FRS and direct port connections increased by about 4%.

The 100MB switched services are direct connections to the 155MB ATM “backbone”. Since FY2000, many agency application servers have been connected to the ATM backbone at MITC and McCormack, either directly or through switches. Web servers accessed via the Internet must be located behind a firewall usually through a shared 100MB switched connection and within what’s known as the DMZ. ITD established two additional 100MB connection standards for these connections:

100MB Switched – Shared: Two or more servers share a 100MB port connection through a switch or common bus. This rate is **\$539.00** per month.

100MB Switched – Shared Application: Four or more servers or server applications share a 100MB connection or are in a group of directly connected application servers. This rate is **\$456.00** per month.

A rate for 155 MB ATM service has been added for agencies with direct connections to the ATM backbone.

The current services and rates are as follows:

<u>Connection Type</u>	<u>Dedicated Port</u>	<u>Shared Port</u>
10 MB Campus Hub	Replaced w/ Routed / Switched	N/A
10 MB Campus Routed or Switched	\$ 415.00 / month	N/A
100MB Switched Connection	\$ 1,079.00 / month	\$ 539.00 / month
100MB Switched - Shared Application	N/A	\$ 456.00 / month
155 MB ATM Backbone	\$ 1,245.00 / month	\$ N/A
56 KB Frame Relay *	\$ 415.00 / month	\$ 311.00 / mo (discont'd)
384 KB Frame Relay	\$ 518.00 / month	\$ 347.00 / month
1.544 MB (T1) Frame Relay	\$ 1037.00 / month	\$ 695.00 / month
45MB (T3) Point-to-Point - ITD only	\$ 9,131.00 / month	\$ N/A
Transparent LAN Service (TLS)		
10 Mb TLS	\$ 2,301.00 / month	N/A
100 Mb TLS	\$ 6,137.00 / month	\$ 2,301.00 / month
Install / Move / Upgrade FRS Circuit	\$ 228.00 each	\$ 219.00 each

The standard charge to install, relocate or upgrade a FRS service (56KB to 384KB or T1 or 384KB to T1) within a building or to a new location is **\$228.00**. Telco charges for additional inside wiring are billed back to the client. ITD will install routers and related equipment at no charge except locations beyond I495. In such cases, ITD will configure the equipment, send it to the site and “talk” customer technicians through the install. Alternatively, the client may pay ITD or a 3rd party to install the equipment.

Clients must purchase routers and compatible modems (CSUs) specified by ITD Communications Services either directly or through ITD and charged back to the client. Routers currently range upwards from \$5,000. ITD assumes ownership and control of all network equipment for maintenance, upgrades and accountability purposes.

DDSII Service

DDSII 19.2Kbs are dedicated circuits for non-state agencies *only*. The base rate for each line drop is **\$209.68** plus mileage at **\$2.10** per mile per month. The non-state rates are **\$278.87** /drop and **\$2.79** / mile, respectively. Verizon installation and inside wiring costs are charged directly to the client.

Local Area Network (LAN)

LAN support will be charged back to clients in the McCormack and State House locations, principally clients previously supported by the former Central Business Office (CBO). The rate for these services is

\$59.00 per seat per month. The charge per agency each month is based on the number of mailboxes in MassMail during that month.

PBX Maintenance

In unique situations where two or more agencies share one PBX system which ITD maintains, the costs are distributed by agency port ownership. State House agencies with telephone lines switched through the State House PBX are charged **\$3.73** in FY2004 for each port per month for maintenance.

FINANCIAL / PAYROLL SERVICES

As of FY2001, the data center costs incurred by ITD for the Comptroller's centralized MMARS and Payroll operations are charged back to agencies based on processed MMARS transactions and average payroll head count, respectively. See joint ITD/OSC letter of August 23, 2000 which explains these charges.

MMARS Processed Transactions.

MMARS transaction services will be charged at the rate of **8.5 cents** per processed transaction reported for the FY2004 billing month to recover related central data center processing costs.

Average Payroll Head Count. (Not billed as a separate service in FY2004).

Payroll services will be charged are incorporated into the HR/CMS rate below. We expect the contribution of these costs to diminish significantly by FY2005.

HR/CMS Checks Issued.

The cost of this service is recovered by charging **\$2.69** for each agency employee and individual contractor check issued through HR/CMS. Since there are 26 bi-weekly payroll periods per year, the cost is **\$69.94** for each person on the payroll for the full FY. Note that this charge includes the equivalent of \$0.314 / check charged as a head count for PMIS / PCRS in FY2003. The monthly check count is obtained from Information Warehouse Table **dbo_SW_PW_PAY_CHECK**.

MASSMAIL SERVICES

The Commonwealth commenced to centralize and standardize disparate agency directories and messaging platforms onto Microsoft Windows 2000 Active Directory (AD) and Exchange 2000 in FY2000

ITD established rates for MassMail based on mail box size. The costs recovered are for servers, storage, support and related operating costs. They do not include MassMail development and implementation costs financed with capital funds. The rates for FY2004 are as follows:

Mail Boxes up to 50MB	Cat A	\$ 8.85 per Month
Mail Boxes under 100MB	Cat B	\$13.21 per Month
Mail Boxes under 150MB	Cat C	\$17.69 per Month

Refer to the [MassMail](#) web page for policy governing services. Policy re charges, mailbox size, dispute resolution, etc., is covered under [MassMail Policies and Procedures](#) and [Service Level Description](#).

MID-RANGE SERVICES

ITD supports many Mid-Range (Client / Server) systems and applications housed at MITC and the McCormack Bldg. Some are on servers physically located at agency sites behind ITD provisioned remote firewalls. The costs incurred by ITD to support these services include housing the servers, hardware maintenance, operation, system related software licenses, and database support.

Standards for which costs were charged back were not well defined prior to FY2002. Some clients bought hardware and/or software directly while others were procured by ITD and charged back to the client agency. As of FY2002 ITD adopted a *tiered* rate structure to recover acquisition and support costs using a methodology which Gartner recommended. Also, the [Ownership](#) policy standard was applied to

all new applications; i.e., all hardware and software shall be purchased, owned and maintained by ITD and costs charged back to clients.

For FY2003, the *tiered* model was further refined. Direct labor and software purchases were replaced with flat support rates to achieve uniform and predictable monthly charges. Flat rates to install / setup each server, it's operating software, the client application, website "hardening" and databases were also adopted. Only one-time hardware procurements, non-standard or special software and agency requested support is directly charged to the client. This model was modified again for FY2004. Software support and operational support were combined into one service with three rates: WINTEL, IBM AIX and Oracle IAS. An HP-Unix rate was added. Second, there are only two Database rates: SQL and Oracle. There have been no changes to one-time set-up charges other than reducing the rates.

Remote Firewall Service (FWS)

Some clients require their Internet applications to be sited on servers within their physical locations rather than behind firewalls at MITC or McCormack. These remote or extended DMZ firewalls are installed and maintained by ITD provided that the client application complies with ITD's [Security Standards](#) for secure Remote FWS. As of FY2002, the setup of a Remote FWS is the charged the same as Loading a Client Application at MITC or McCormack sites. Similarly, the Remote FWS will be charged the Server Operational Support rate.

INSTALLATION AND SETUP

Installation and setup of servers and software at ITD hosted operations or extended DMZ agency remote sites for new applications or additions to existing systems will be charged flat fees based on the hardware and/or software components installed. These FY2004 fees are as follows:

Unix Systems (IBM or HP):	Vendor Install and Server Setup	\$	Included in Purchase
	ITD Install and Setup Server and S/W	\$	3,355.00 / server
WIN 2000 Systems:	Install and Setup Server with Standard S/W	\$	914.00 / server
	1. Load Client Application or	\$	489.00 / server
	Install Remote FWS	\$	489.00 / server
	2. Harden Server (Website)	\$	1,334.00 / server
Install Database:	Oracle 8i/9i or SQL Server (Optional)	\$	306.00 / server

Unix Servers Unix applications are usually installed and setup by the vendor. The costs for the hardware, operating system and standard software installation are usually included in the purchase contract and charged back to the client. When installed by ITD, it includes cabling, operating system with patches as required and standard server software per [Standard Server Configurations](#). The flat fee installation charge is **\$3,355.00**.

WinTel. The installation and setup charge for a WinTel Server is **\$914.00** including rack cabling, loading the operating system with required patches and standard server software per [Standard Server Configurations](#). Additional charges depend on the application and client choice. ITD will install the server application procured or developed by the client or his agent for **\$489** on the Standard Server Configurations defined below. The same charge applies to installing remote FWS applications.

Standard Server Configurations

The standard hardware and software server configurations supported by ITD for new installations are as follows:

Hardware Platform	Operating System	Software (1,2)
HP 9000	HP Unix	Client Application
IBM RS 6000	IBM AIX	NetIQ Monitors, SMS, Aperture Client
		NetIQ-IIS or Oracle IAS HTTP (Website)
		Oracle Enterprise 8i/9i DB (Option)
		Norton AV
WinTel	Windows 200 Advanced Server	Client Application
		HFNECHK Pro, Backup Agent
		NetIQ Monitors, SMS, Aperture Client,
		NetIQ-IIS or Oracle IAS HTTP (Website)
		SQL Advanced Server DB (Option) or
		Oracle Enterprise 8i/9i DB (Option)
		Nokia FW or equivalent (Remote FWS)
		Norton AV

- 1) Installation of Remote FWS at an extended DMZ site is charged the same.
- 2) Internet websites require “hardening” and testing against viruses and denial of service attacks in accordance with ITD [Security Standards](#) . The charge for Hardening is **\$1,334.00**.

Databases

The flat charge to install either Oracle 8i/9i or SQL on either Unix or Windows servers is **\$306.00** .

SERVER HARDWARE SUPPORT

Tier 1 and Tier 2 monthly support charges are modified from FY2003 . They are:

Tier 1	Occupancy Only	\$	49.00 per Server / Month
Tier 2-3	H-P Unix Server	\$	4,812.00 per Server / Month

Tier 1 is strictly an occupancy charge for servers that require no maintenance or other server support or where the client provides maintenance and server support directly. The rates for standard (rack mounted) and non-standard (bay type) have been collapsed into one rate at **\$49.00** per server per month.

Tier 2-3 includes hardware maintenance and software support for the HP-UNIX server. This includes the application software as well as the OS.

SERVER SOFTWARE and OPERATIONAL SUPPORT

Each server software charge includes the cost of the Operating System and [Standard Server Configuration](#) software licenses.. It includes monitoring server logs and updating AV files for new threats and vendor license technical support. It includes troubleshooting, analysis and server re-boots during security breaches or denial of service attacks. Monthly charges are based on recovering the cost of the software licenses, labor, including on-going licensor support, over an assumed life cycle between upgrades or the current FY licensor contract charges as applicable. The FY2004 rates are as follows:

Wintel Server and Support	\$	548.00 per Server / Month
IBM AIX Server and Support	\$	1,398.00 per Server / Month
Oracle IAS Server	\$	363.00 per CPU Unit / Month

DATABASE SOFTWARE SUPPORT

ITD supports enterprise editions of SQL and Oracle. Applications that were using the standard editions of either DB have been upgraded to the Enterprise Edition. The FY2004 rates are as follows:

SQL Enterprise Edition	\$	439.00 per CPU Unit / Month
Oracle 8i/9i Enterprise Edition	\$	726.00 per CPU Unit / Month

OPEN SYSTEM STORAGE (Client / Server)

Open System Storage (OSS) is partitioned or allocated in specific segments dedicated to Client / Server (C/S) applications. Each space allocated is fixed and managed by the C/S application owner or designated support staff. The OS/390 mainframe storage is managed and allocated differently by MITC data management. Thus, the rate of **\$0.471** per GB-day or **\$0.022** per thousand IBM 3380 track-days is significantly less than that for OS/390 mainframe storage since some storage management costs are born directly or indirectly within application and/or database support costs.

OTHER SOFTWARE SUPPORT

Special software dedicated to a single client's application(s) is charged directly to the client since it isn't used by other agencies not normally supported by ITD. The software must be acquired by ITD for licensing and ownership purposes. Clients are charged monthly for the aggregate purchase, lease or license costs ITD incurs. The following products are currently licensed by ITD for specific clients whose applications require them and charged back at the monthly rates indicated. The rates for these services are the same as in FY2003:

IMS/ESA from IBM	\$	12,573.00 per Month
Oracle 8i Enterprise (M/F)	\$	24.32 per Concurrent User / Month

DIRECT LABOR SUPPORT

ITD provides direct agency support at MITC and McCormack for clients whose projects require OSB skills. These are services which the client directly engages ITD to perform for mainframe application support, forms development or mid-range development beyond the scope of the standard rates listed herein. Direct labor services must be negotiated with the client before work may commence. Hourly rates are the same as in FY 2003 and are as follows:

Contract Consultant	\$	Contract Rate
Mid-Range Systems / Database Administration	\$	\$ 63.00 per Hour
Mid-Range Operations	\$	\$ 45.00 per Hour
Systems / Network Engineering	\$	\$ 49.00 per Hour
Operations / Forms Design	\$	\$ 36.00 per hour

Hourly rates do not include charges for hardware, software or other services listed elsewhere. Clients should contact their ITD Business Relationship Manager (BRM) for further information and quotes on application(s) requiring hourly support services.

MAILROOM SERVICES

Services provided by the Central Mailing Facility (CMF) in the McCormack Bldg and the Customer Services Center (CSC) at MITC are billed as postal services (Object Code E05), not as computer services (E10). A separate Inter-agency Encumbrance (IE) is issued to each agency utilizing these ITD services. Thus, actual usage is billed on a separate Inter-agency Voucher (IV). However, invoiced charges for both appear on the same monthly summary and detail reports with invoiced charges for computer and network services. Services provided by CMF in and CSC are billed at the rates indicated below:

Type	Rate
Clerical	\$0.32 per document x CF
Data Entry	\$2.55 per 1000 keystrokes x CF
Microfilm	\$0.05 per frame
CSC Mail Room	\$0.256 per document (manual processing) x CF
DIMS Machine	\$0.035 per envelope (automated processing) x CF
CMF Metered Mailing	Metered Postage plus 16.8%
CMF Report Bin	\$22 per month for a Level 1 size bin.
CMF Inter-Office Mail Bin	\$6 per month for a Level 1 size bin.
CMF Daily Incoming Mail Bin	\$92 per month for a Level 1 size bin.
CMF Inter-Office Pickup or Delivery	\$44 per month.
CMF State House Courier	\$190 per month.
CMF Downtown Courier	\$351 per month.

CF = a complexity factor assigned by the CSC. This factor is determined by comparing the time required to perform a specific job or project with a "standard". For example, two mailing projects each consist of 1,000 mailing pieces. However, production on the first job averages one completed envelope (document) or package per minute while the second averages two per minute. Thus, the first job takes twice as long to complete. If the second job is the "standard" with CF = 1, then CF = 2 for the first job.

NOTE: CSC clerical, data entry and microfilm services are no longer available except for specific projects arranged through your BRM.

Bin Size = There are 4 Bin Sizes based on the volume of mail or reports. The Bin Size has been assigned to you based on your FY2003 mail or report volume. For Bin Size changes, please arrange for the appropriate bin size through your BRM.

SPECIAL SERVICES

Services provided by ITD not specified explicitly in the above schedule must be negotiated with the ITD through your BRM and may require the client to execute a Business Application Request (BAR). Such services are known as "Special" because they are not within the rate schedule. Some special services have been established for specific clients as indicated below.

Dedicated MITC Services

Due to the size of DMA's MMIS project team and on-going development and production work, ITD agreed to provide limited MITC office space for MMIS staff.

Office Space. This is charged to DMA at **\$2.00** per square foot based on MITC lease costs.

Telephone Services. Since MMIS staff is quartered at MITC, variable Telco costs are charged to ITD which must be billed back to DMA.

One-Time Charges

Equipment. Costs incurred by ITD to purchase, lease or maintain dedicated equipment for clients not otherwise covered within the above scheduled rates for services are billed back as one-time charges.

Software Licenses. Costs ITD incurs to purchase or license and maintain non-standard software for clients not listed above under “Dedicated Software” are billed back as one-time charges.

Inside Wiring. Telco charges incurred by ITD for on-premises wiring required to install routers or other network equipment are billed back to the client as one-time charges

MINIMUM CHARGE

The minimum charge per month for either data center / network or mail room services exclusive of any applicable credit or adjustment is \$20. This minimum covers the cost to bill clients whose usage of ITD services is under \$20 for any month. For example, if the total charges for one month were \$12.30, an adjustment of \$7.70 would be applied to meet the \$20 billing minimum. This minimum should not be confused with cases where the *year-to-date balance due* is negative (a credit balance) due to prior adjustments or credits after charges and adjustments for the current month have been applied. No bill is issued unless the balance due exceeds \$20.

Note 1

PERFORMANCE FACTORS

Effective July 1, 1988, the HDS XL/90 became the base computer standard for the CPU rate. It was assigned a Performance Factor (PF) of 1.0. Each subsequent upgrade is assigned a performance factor relative to this system per the table below. The ASYS and BSYS (or A/BSYS for short) at the Massachusetts Information Technology Center (MITC) were upgraded from an IBM 9672/R75 CMOS 7-way processor to a high speed X47 4-way processor, operating with two logical system image or LPARs.

Each processor in the Model 9672/X47 complex is more than three time faster than the IBM model R75 processor replaced in December 2002. Partitioning into two or more system images consumes additional unmeasured overhead. On average, a specific task will take less than one-third as much *measured* CPU time to complete than in the model R75. To yield the same charge for the shorter *measured* CPU time, a PF of 7.4340 was assigned to the X47 vs. 2.3107 for the R75.

As of FY99, the Registry of Motor Vehicle's (RMV) Amdahl 5995/3570 processor was placed under ITD Data Center administration at MITC. It was upgraded to an Amdahl Millennium 2000/2032A CMOS 3-way processor and OS/390 as of FY2000 with a PF of 3.4579 relative to the HDS XL/90 standard. As of 10/1/01 RSYS was upgraded to an Amdahl 2000/2045A CMOS 4-way processor with a PF of 3.6355.

These are the performance factors for all computers installed, upgraded or added since 7/1/88:

FROM	TO	SYSTEM	MODEL	PF
7/01/88	10/08/88	ASYS	HDS XL/90	1.0000
		BSYS	IBM 3081K+	0.4464
10/09/88	12/17/88	ASYS	HDS XL/100	0.9373
		BSYS	IBM 3081K+	0.4464
12/18/88	9/30/90	ASYS	HDS XL/100	0.9373
		BSYS	IBM 3090/200E	0.9368
10/01/90	5/31/94	ASYS	HDS EX/100	1.1063
		BSYS	IBM 3090/200E	0.9368
6/01/94	11/30/95	ASYS	HDS EX/100	1.1063
		BSYS	IBM 3090/500E	0.7729
12/01/95	11/30/97	ASYS	HDS EX/100	1.1063
		BSYS	IBM 3090/600J	1.0146
12/01/97	1/31/99	A/BSYS	IBM 9672/R55	2.5674
7/01/98	6/30/99	MSYS	Amdahl 5995/3570	2.7750
2/01/99	9/30/01	A/BSYS	IBM 9672/R75	2.3107
7/01/99	9/30/01	RSYS	Amdahl 2000/2032A	3.4579
10/01/01	1/01/03	A/BSYS	IBM 9672/R75	2.3107
10/01/01	1/01/03	RSYS	Amdahl 2000/2045A	3.6355
1/01/03	--/--/--	A/BSYS	IBM 9672/X47	7.4340
1/01/03	--/--/--	RSYS	Amdahl 2000/2045A	3.6355

Note 2

ADJUSTMENTS TO CPU AND I/O USAGE CHARGES

CPU hours and I/O (EXCP) measurements for on-line transactions (CICS, COM-LETE, IMS, IDMS and ADABAS) require adjustment to account for usage not reported in the transaction detail and for shared resources attributable to on-line support, such as performance monitors. TSO sessions and batch jobs require adjustment for just shared resources which support these applications.

The standard for CPU and I/O charges for all applications is usage as reported by the System Measurement Facility (SMF). On-line transaction CPU measurement is less than that reported by SMF. Usually, the same is true for transaction I/Os. Thus, on-line transaction measurements must be adjusted accordingly.

The following illustrates how CICS transaction measured CPU time is converted to the SMF measurement standard and reported as "Measured CPU Hours" in the invoice detail:

$$C_h = C_m \times F_c \times F_t \text{ where}$$

C_m is the transaction measured CPU time;

F_c is the CICS Application region capture ratio adjustment factor measured as Total SMF CPU time / Total transaction CPU time; and

F_t is the CICS Terminal region adjustment factor if the CICS application is hosted by a Terminal region. ($F_t = 1$ otherwise.)

The result is adjusted for overhead resources and converted to the equivalent billing CPU time standard (HDS XL/90) and reported as "Billable CPU Units" in the invoice detail:

$$C_a = C_h \times F_p \times F_a \text{ where}$$

F_p is the CPU performance factor relative to the billing baseline; and

F_a is the CICS monitoring and network resource adjustment factor.

CICS measured I/Os are similarly converted to SMF based I/Os and reported as "Million I/Os" in the invoice detail. The result is then adjusted for monitoring and network overhead, divided by 1000 and reported as "Billable I/O Units" in the invoice detail.

Conversion of ADABAS, IMS, IDMS and COM-LETE transaction CPU and I/O measurements to the SMF reporting standard, adjustments for shared resources and conversion to the CPU time standard is comparable to that for CICS though less complex. TSO sessions and batch jobs require adjustments for shared resources and conversion to the CPU time standard only as these applications are reported by SMF directly.

Note 3

PAGE COUNT ADJUSTMENTS

Printed output is charged by the page count reported by the system. However, page count must be adjusted for some applications. Certain programs internally control page breaks so that the system measured page count is too low. Conversely, label printing programs yield high counts when multiple page breaks occur within one stock page. The charge would be too low in the first case and too high in the latter. Adjustments are also required for printing features which yield multiple logical pages on one physical page. The chargeback system adjusts page counts for each of these circumstances as explained below.

Adjustments for Unusually High Lines per Page Counts

Print output whose lines per page exceed 60 for standard pages or 35 for special forms is re-computed. The re-computed page count is based on 40 lines per page for standard pages and 25 lines per page for special forms.

For example, a print output of 3,600 lines with a page count of 5 has a line per page count of 720. This exceeds the 60 lines per page limit. The re-computed page count is 90 (3,600 divided by 40) if the output is "standard" or 144 (3,600 divided by 25) if it is a special form.

Adjustments for Unusually Low Lines per Page Counts

Special forms output whose lines per page is less than 15 (e.g., checks or name and address cards) are re-computed based on 15 lines per page as the lower limit.

For example, a special forms output of 3,600 lines with a page count of 900 has a line per page count of only 4, well below the threshold of 15. The re-computed page count is 240 (3,600 divided by 15).

Adjustments for Compressed Printer Output

The IBM Advanced Function Print (AFP) and the Xerox laser printer programs can yield multiple *logical* pages on one *physical* page, including two-sided printing. The chargeable page count is adjusted to the physical page count based on the class (SYSOUT) assigned to the printed output.